

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for manufacturing a semiconductor device comprising:

the first step of forming a semiconductor film over a substrate;

the second step of forming an insulating film on a surface of the semiconductor film;

the ~~second~~ third step of forming a thin oxide film on a surface of the ~~semiconductor~~ insulating film by applying water in which ozone is dissolved; and

the ~~[[third]]~~ fourth step of etching the ~~semiconductor~~ insulating film to remove the thin oxide film and contaminant impurities on the surface of the ~~semiconductor~~ insulating film by applying an etching solution while spinning the substrate~~[[; and]]~~.

~~the fourth step of forming a gate-insulating film in contact with the semiconductor film after the third step,~~

wherein the second to fourth steps are performed in sequence without being exposed to air.

2. (Currently Amended) A method for manufacturing a semiconductor device comprising:

the first step of forming an amorphous semiconductor film over a substrate;

the second step of forming a crystalline semiconductor film by crystallizing the amorphous semiconductor film;

the third step of forming an island-shaped crystalline semiconductor layer by patterning the crystalline semiconductor film;

the fourth step of forming a gate insulating film in contact with the island-shaped semiconductor layer;

~~the fourth~~ fifth step of forming a thin oxide film on a surface of the ~~island-shaped crystalline semiconductor layer~~ gate insulating film by applying water in which ozone is dissolved; and

the ~~[[fifth]]~~ sixth step of etching the ~~crystalline semiconductor layer~~ gate insulating film to remove the thin oxide film and contaminant impurities on the surface of the ~~crystalline semiconductor layer~~ gate insulating film by applying an etching solution while spinning the substrate; and in an atmosphere purged with nitrogen.

~~the sixth step of forming a gate insulating film in contact with the crystalline semiconductor layer after the fifth step;~~

wherein said fourth to sixth steps are performed in sequence without being exposed to air.

3. (Currently Amended) A method for manufacturing a semiconductor device comprising:

the first step of forming a base insulating film over a substrate;

the second step of forming a thin oxide film on a surface of the base insulating film by applying water in which ozone is dissolved;

the third step of etching the base insulating film to remove the thin oxide film and contaminant impurities on the surface of the base insulating film by applying an etching solution while spinning the substrate; and

the fourth step of forming a semiconductor film in contact with the base insulating film after the third step,

wherein the second to fourth steps are performed in sequence without being exposed to air.

4. (Previously Presented) A method for manufacturing a semiconductor device comprising:

a step of forming a gate insulating film over a substrate;

a step of forming a thin oxide film on the surface of the gate insulating film by applying water in which ozone is dissolved;

a step of etching the gate insulating film to remove the thin oxide film and contaminant impurities on the surface of the gate insulating film by applying an etching solution while spinning the substrate; and

a step of forming a gate conductive film in contact with the gate insulating film after the step of etching,

wherein the step of etching the gate insulating film and the step of forming the gate conductive film are performed in sequence without being exposed to air.

5. (Previously Presented) A method for manufacturing a semiconductor device according to claim 1, wherein the etching solution comprises fluorine.

6. (Previously Presented) A method for a semiconductor device according to claim 1, wherein the water comprises ozone at a concentration of 6 mg/L or more.

7. (Previously Presented) A method for manufacturing a semiconductor device according to claim 2, wherein the etching solution comprises fluorine.

8. (Previously Presented) A method for a semiconductor device according to claim 2, wherein the water comprises ozone at a concentration of 6 mg/L or more.

9. (Previously Presented) A method for manufacturing a semiconductor device according to claim 3, wherein the etching solution comprises fluorine.

10. (Previously Presented) A method for a semiconductor device according to claim 3, wherein the water comprises ozone at a concentration of 6 mg/L or more.

11. (Previously Presented) A method for manufacturing a semiconductor device according to claim 4, wherein the etching solution comprises fluorine.

12. (Previously Presented) A method for a semiconductor device according to claim 4, wherein the water comprises ozone at a concentration of 6 mg/L or more.

13. (Currently Amended) A method for manufacturing a semiconductor device comprising:

forming a semiconductor film over a substrate;

forming an insulating film over the semiconductor film; and

forming a thin oxide film on a surface of the ~~semiconductor~~ insulating film by applying pure water in which ozone is dissolved; and

etching the surface of the ~~the semiconductor~~ insulating film with an acid solution which includes fluorine to remove the thin oxide film and at least one of B, Na, K, Mg, and Ca by applying the acid solution while spinning the substrate[; and].

~~forming a gate-insulating film in contact with the semiconductor film.~~

14. (Currently Amended) A method for manufacturing a semiconductor device comprising:

forming a base insulating film over a substrate;

forming a thin oxide film on a surface of the base film by applying pure water in which ozone is dissolved;

etching the surface of the base insulating film with an acid solution which includes fluorine to remove the thin oxide film and at least one of B, Na, K, Mg, and Ca by applying the acid solution while spinning the substrate; and

forming a semiconductor film in contact with the base insulating film.

15. (Previously Presented) A method for manufacturing a semiconductor device comprising:

forming a gate insulating film over a substrate;

forming a thin oxide film on a surface of the gate insulating film by applying pure water in which ozone is dissolved;

etching the surface of the gate insulating film with an acid solution which includes fluorine to remove the thin oxide film and at least one of B, Na, K, Mg, and Ca by applying the acid solution while spinning the substrate; and

forming a gate conductive film in contact with the gate insulating film after the contaminant impurities are removed.